```
In [ ]: import os
        from azure.core.exceptions import ResourceNotFoundError
        from azure.ai.formrecognizer import FormRecognizerClient
        from azure.ai.formrecognizer import FormTrainingClient
        from azure.core.credentials import AzureKeyCredential
In [ ]: AZURE FORM RECOGNIZER ENDPOINT = "https://trongformrecognizer.cognitiveservices.azure.com/"
        AZURE FORM RECOGNIZER KEY = "7e7a85d82f884b57b2a797cd5f571544"
In [ ]: endpoint = AZURE FORM RECOGNIZER ENDPOINT
        key = AZURE FORM RECOGNIZER KEY
In [ ]: form training client = FormTrainingClient(endpoint=endpoint, credential=AzureKeyCredential(key))
        saved model list = form training client.list custom models()
In [ ]: trainingDataUrl = "https://trongstorageaccounts.blob.core.windows.net/trongblobcontainers?sp=rcdl&st=2023-03-13T08:01
In [ ]: # Fill in the code to begin labeled training
        training process = form training client.begin training(trainingDataUrl, use training labels=True)
        custom model = training process.result()
In [ ]: custom model
Out[]: CustomFormModel(model id=d9261095-519d-4ce0-bf1a-0a44004b0bac, status=ready, training started on=2023-03-13 09:16:38
        +00:00, training completed on=2023-03-13 09:16:39+00:00, submodels=[CustomFormSubmodel(accuracy=0.883, model id=d926
        1095-519d-4ce0-bf1a-0a44004b0bac, fields={'Baggage': CustomFormModelField(label=None, name=Baggage, accuracy=0.714),
        'Boarding Time': CustomFormModelField(label=None, name=Boarding Time, accuracy=0.857), 'Carrier': CustomFormModelFie
        ld(label=None, name=Carrier, accuracy=0.995), 'Class': CustomFormModelField(label=None, name=Class, accuracy=0.995),
        'Date': CustomFormModelField(label=None, name=Date, accuracy=0.857), 'Flight Number': CustomFormModelField(label=Non
        e, name=Flight Number, accuracy=0.995), 'From': CustomFormModelField(label=None, name=From, accuracy=0.857), 'Gate':
        CustomFormModelField(label=None, name=Gate, accuracy=0.857), 'Passenger Name': CustomFormModelField(label=None, name
        =Passenger Name, accuracy=0.714), 'Seat': CustomFormModelField(label=None, name=Seat, accurac
In [ ]: # Fill in the code to get model ID
        custom model.model id
Out[]: 'd9261095-519d-4ce0-bf1a-0a44004b0bac'
```

```
In [ ]: # Fill in the code to get status
        custom model.status
Out[]: 'ready'
In [ ]: custom model.training started on
Out[]: datetime.datetime(2023, 3, 13, 9, 16, 38, tzinfo=<isodate.tzinfo.Utc object at 0x7f3f651fad10>)
In [ ]: custom model.training completed on
Out[]: datetime.datetime(2023, 3, 13, 9, 16, 39, tzinfo=<isodate.tzinfo.Utc object at 0x7f3f651fad10>)
In [ ]: # Fill in the code to get training documents
        custom model.training documents
Out[]: [TrainingDocumentInfo(name=boarding trongphan.pdf, status=succeeded, page count=1, errors=[], model id=None),
         TrainingDocumentInfo(name=boarding-avkash.pdf, status=succeeded, page count=1, errors=[], model id=None),
         TrainingDocumentInfo(name=boarding-james-webb.pdf, status=succeeded, page count=1, errors=[], model id=None),
         TrainingDocumentInfo(name=boarding-james.pdf, status=succeeded, page count=1, errors=[], model id=None),
         TrainingDocumentInfo(name=boarding-libby.pdf, status=succeeded, page count=1, errors=[], model id=None).
         TrainingDocumentInfo(name=boarding-radha-s-kumar.pdf, status=succeeded, page count=1, errors=[], model id=None),
         TrainingDocumentInfo(name=boarding-sameer.pdf, status=succeeded, page count=1, errors=[], model id=None)]
In [ ]: for doc in custom model.training documents:
            print("Document name: {}".format(doc.name))
            print("Document status: {}".format(doc.status))
            print("Document page count: {}".format(doc.page count))
            print("Document errors: {}".format(doc.errors))
```

```
Document name: boarding trongphan.pdf
         Document status: succeeded
        Document page count: 1
        Document errors: []
        Document name: boarding-avkash.pdf
        Document status: succeeded
        Document page count: 1
         Document errors: []
        Document name: boarding-james-webb.pdf
         Document status: succeeded
        Document page count: 1
        Document errors: []
         Document name: boarding-james.pdf
        Document status: succeeded
         Document page count: 1
        Document errors: []
        Document name: boarding-libby.pdf
        Document status: succeeded
        Document page count: 1
         Document errors: []
        Document name: boarding-radha-s-kumar.pdf
        Document status: succeeded
        Document page count: 1
         Document errors: []
        Document name: boarding-sameer.pdf
         Document status: succeeded
        Document page count: 1
        Document errors: []
In [ ]: custom_model.properties
Out[]: CustomFormModelProperties(is composed model=False)
In [ ]: custom_model.submodels
```

Out[]: [CustomFormSubmodel(accuracy=0.883, model id=d9261095-519d-4ce0-bf1a-0a44004b0bac, fields={'Baggage': CustomFormMode lfield(label=None, name=Baggage, accuracy=0.714), 'Boarding Time': CustomFormModelField(label=None, name=Boarding Ti me, accuracy=0.857), 'Carrier': CustomFormModelField(label=None, name=Carrier, accuracy=0.995), 'Class': CustomFormM odelField(label=None, name=Class, accuracy=0.995), 'Date': CustomFormModelField(label=None, name=Date, accuracy=0.85 7), 'Flight Number': CustomFormModelField(label=None, name=Flight Number, accuracy=0.995), 'From': CustomFormModelFi eld(label=None, name=From, accuracy=0.857), 'Gate': CustomFormModelField(label=None, name=Gate, accuracy=0.857), 'Pa ssenger Name': CustomFormModelField(label=None, name=Passenger Name, accuracy=0.714), 'Seat': CustomFormModelField(l abel=None, name=Seat, accuracy=0.995), 'To': CustomFormModelField(label=None, name=To, accuracy=0.857)}, form type=c ustom:d9261095-519d-4ce0-bf1a-0a44004b0bac)]

```
In [ ]: for submodel in custom model.submodels:
            print(
                 "The submodel with form type '{}' has recognized the following fields: {}".format(
                    submodel.form type,
                     ", ".join(
                            field.label if field.label else name
                            for name, field in submodel.fields.items()
                    ),
```

The submodel with form type 'custom:d9261095-519d-4ce0-bf1a-0a44004b0bac' has recognized the following fields: Bagga ge, Boarding Time, Carrier, Class, Date, Flight Number, From, Gate, Passenger Name, Seat, To

```
custom model.model id
Out[]: 'd9261095-519d-4ce0-bf1a-0a44004b0bac'
        custom model info = form training client.get custom model(model id=custom model.model id)
        print("Model ID: {}".format(custom model info.model id))
        print("Status: {}".format(custom model info.status))
        print("Training started on: {}".format(custom model info.training started on))
        print("Training completed on: {}".format(custom model info.training completed on))
        Model ID: d9261095-519d-4ce0-bf1a-0a44004b0bac
```

Status: readv

Training started on: 2023-03-13 09:16:38+00:00 Training completed on: 2023-03-13 09:16:39+00:00

## TEST MODEL

```
new test url = "https://trongstorageaccounts.blob.core.windows.net/trongblobcontainers/boarding trongphan.pdf?sp=rack
In [ ]:
        new test url
In [ ]:
Out[]: 'https://trongstorageaccounts.blob.core.windows.net/trongblobcontainers/boarding_trongphan.pdf?sp=racwdt&st=2023-03-
        13T09:58:35Z&se=2023-03-13T17:58:35Z&spr=https&sv=2021-12-02&sr=b&sig=q4KFTvTZKP5laNbFbAEDZcyP%2F23xbdcG53%2F%2F8WuE
        FgU%3D'
        form recognizer client = FormRecognizerClient(endpoint=endpoint, credential=AzureKeyCredential(key))
        custom model.model id
        'd9261095-519d-4ce0-bf1a-0a44004b0bac'
        custom model info.model id
        'd9261095-519d-4ce0-bf1a-0a44004b0bac'
        custom test action = form recognizer client.begin recognize custom forms from url(model id=custom model info.model id
        custom test action.status()
Out[]: 'notStarted'
In [
        custom test action result = custom test action.result()
In [ ]: for recognized content in custom test action result:
            print("Form type: {}".format(recognized content.form type))
            for name, field in recognized content.fields.items():
                print("Field '{}' has label '{}' with value '{}' and a confidence score of {}".format(
                    name,
                    field.label data.text if field.label data else name,
                    field.value.
                    field.confidence
                ))
```

Form type: custom:d9261095-519d-4ce0-bf1a-0a44004b0bac

Field 'Carrier' has label 'Carrier' with value 'VN' and a confidence score of 0.995

Field 'Date' has label 'Date' with value 'March 12, 2023 March 12, 2023' and a confidence score of 0.973

Field 'Baggage' has label 'Baggage' with value 'No' and a confidence score of 0.952

Field 'Boarding Time' has label 'Boarding Time' with value '08:28 PM PST 08:28 PM PST' and a confidence score of 0.9 78

Field 'Gate' has label 'Gate' with value 'G2 G2' and a confidence score of 0.983

Field 'Flight Number' has label 'Flight Number' with value '456' and a confidence score of 0.995

Field 'Seat' has label 'Seat' with value '28C 28C' and a confidence score of 0.99

Field 'Class' has label 'Class' with value 'E' and a confidence score of 0.995

Field 'Passenger Name' has label 'Passenger Name' with value 'Trong Phan Trong Phan' and a confidence score of 0.888

Field 'To' has label 'To' with value 'Ha Noi Ha Noi' and a confidence score of 0.981

Field 'From' has label 'From' with value 'Sai Gon Sai Gon' and a confidence score of 0.98